

Remarks

The various parts of the Office Action (and other matters, if any) are discussed below under appropriate headings.

Specification

The Examiner objects to the specification and the Abstract due to various informalities. By way of the forgoing amendments to the specification and Abstract, the objections have been rendered moot. No new matter has been added.

Accordingly withdrawal of the objections to the specification and the Abstract is respectfully requested.

Claim Objections

The Examiner objects to claim 13 for missing a comma. Claim 13 has been canceled and, thus, the objection to claim 13 is moot.

Claim Rejections - 35 USC § 112

Claims 5 and 6 are rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that the applicant regards as the invention.

Claims 5 and 6 have been amended herein to moot the Examiner's rejection. Accordingly, withdrawal of the rejection of claims 5 and 6 is respectfully requested.

Claim Rejections - 35 USC § 102 and § 103

Claims 1-15 stand rejected under 35 USC §102 as being anticipated by *Hasegawa* (U.S. 2002/0081501) and/or under 35 USC §103(a) as being unpatentable over *Hasegawa* in view of *Hickman* (U.S. 6,812,999), *Tu* (U.S. 6,311,319) and/or *Tanaka* (U.S. 2002/0102477). The features of claims 2 and 8 have been included in claims 1 and 7, respectively, and claims 2, 8 and 13 have been canceled. Withdrawal of the rejection of the remaining pending claims is respectfully requested for at least the following reasons.

Claims 1 and 7 have been amended herein to include the features of claims 2 and 8, respectively, and claims 2 and 8 have been canceled. Amended claim 1 recites,

inter alia, forming at least one test pattern on the substrate outside of the first area, wherein said at least one test pattern is formed by duplicating a portion of the first pattern, said test pattern representative of the critical dimension on the photomask. Amended claim 7 recites a mask that includes at least one test pattern formed on a substrate, wherein the at least one test pattern is derived from a portion of the first pattern, said at least one test pattern representative of the critical dimension on the photomask.

The Examiner admits that *Hasegawa* does not disclose duplicating a portion of the first pattern to derive the at least one test pattern. However, the Examiner contends that *Hickman* and/or *Tu* teach this feature, and that it would have been obvious to combine *Hickman* and/or *Tu* with *Hasegawa* to arrive at the invention of claims 2 and 8 (now claims 1 and 7). Applicant respectfully disagrees with the Examiner for at least the following reasons.

Hickman discloses an apparatus and method for correcting variations introduced by one or more components into an exposure field of an optical system. More particularly, *Hickman* discloses that components of a mask may be subject to imperfections from defects caused during the manufacturing of the reticle or pellicle. To correct these defects, *Hickman* proposes to position a corrective filter between a condenser lens and the reticle, wherein the corrective lens correctly projects the pattern onto the photo resist layer. The corrective filter corrects the projection of one or more points of a pattern. *Hickman*, however, has not been found to disclose a test pattern representative of a critical dimension on the photomask. This is because *Hickman* is concerned with correcting defects in the manufacturing process of the reticle. During the manufacturing process, the CD of the actual pattern is measured, and not of a test pattern. It follows that if *Hickman* does not disclose a test pattern, then *Hickman* cannot disclose a test pattern formed by duplicating a portion of a first pattern, as recited in claim 1. Thus, *Hickman* does not make up for the deficiencies of *Hasegawa*.

Tu discloses a process whereby optical proximity corrections may be applied to a mask pattern at minimal costs. In particular, *Tu* discloses that serifs and/or hammerheads are added to vertices of a mask pattern based on a small number of simple rule checks. However, *Tu*, like *Hickman*, has not been found to disclose a test pattern representative of a critical dimension of the photomask. Thus, it follows that if *Tu* does not disclose a test pattern, the *Tu* cannot disclose a test pattern is formed by duplicating a portion of a first pattern, as recited in claim 1. Thus, *Tu* does also not make up for the deficiencies of *Hasegawa*.

Tanaka discloses a photomask that includes a pattern 1a formed on a glass plate GP, wherein a pellicle frame 1g is formed over the pattern 1a. A critical dimension monitor pattern 1h is located under the pellicle 1g. However, *Tanaka* has not been found to disclose that the CD monitor pattern 1h is formed by duplicating a portion of the first pattern as recited in claim 1. Thus, *Tanaka* also does not make up for the deficiencies of *Hasegawa*.

Accordingly, *Hasegawa*, *Hickman*, *Tu* and *Tanaka* have not been found to teach all the features of claim 1 and, thus, claim 1 is patentably distinguishable from the cited art. Similar comments apply to claim 7.

Accordingly, withdrawal of the rejection of claims 1 and 7 is respectfully requested.

Claims 3-6 and 9-12, and 14-15 depend from claim 1 or claim 7 and, therefore, can be distinguished from the cited art for at least the same reasons.

Accordingly, withdrawal of the rejection of claims 3-6, 9-12 and 14-15 is respectfully requested.

Unaddressed issues

The absence in this reply of any comments on the other contentions set forth in the Office Action should not be construed to be an acquiescence therein. Rather, no comment is needed since the rejections should be withdrawn for at least the foregoing reasons.

Conclusion

In view of the foregoing, entry of the above amendments is respectfully requested.

Respectfully submitted,

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